

What is claimed is:

1. A connecting structure of a coaxial cable and a coaxial connector for electrically and mechanically connecting said coaxial cable and said coaxial connector; said connecting structure comprising:

a braided conductor exposed on an end of said coaxial cable;

a metal tape conductor inside said braided conductor on said coaxial cable;

connecting conductor portions formed continuously on an end of a shell of said coaxial connector, said connecting conductor portions being inserted into a space between said braided conductor and said metal tape conductor; and

a caulked, cylindrical sleeve having a crimp height H1, said sleeve formed by jointing two opposing almost semi-circular members, an outside contour of each said almost semi-circular member having a radius R1 so that said radius R1 and said crimp height H1 satisfy the following Equations (1) and (2), respectively:

$$(1) \quad R1 = P1 \times (D + 2 \times T1) \text{ and}$$

$$(2) \quad H1 = P2 \times R1$$

where D is an outside diameter of said coaxial cable, T1 is a plate thickness of said sleeve, P1 is a numerical value set within the range from 0.45 to 0.48, and P2 is a numerical value set within the range from 2.02 to 2.12.

2. The connecting structure of a coaxial cable and a coaxial connector according to Claim 1, further comprising:

protruding strips formed on an outer circumference of said caulked sleeve and

a joint portion between said almost semi-circular member and said protruding strips;
wherein

an outside contour of a cross section of said joint portion connects an outside contour of a cross section of said protruding strips to an outside contour of a cross section of said almost semi-circular member;

said outside contour of said cross section of said joint portion has a curvature radius R2 and said outside contour of the cross section of said protruding strips has a height H2 in a direction of said crimp height H1, said curvature radius R2 and said height H2 satisfy the following Equations (3) and (4), respectively:

$$(3) \quad R2 = P3 \times T1 \text{ and}$$

$$(4) \quad H2 = P4 \times R1$$

where P3 is a numerical value set within the range from 1.8 to 2.2 and P4 is a numerical value set within the range from 1.5 to 2.0.

3. A connecting structure of a coaxial cable and a coaxial connector for electrically and mechanically connecting said coaxial cable and said coaxial connector, said connecting structure comprising:

a braided conductor exposed on an end of said coaxial cable;

a dielectric material inside said braided conductor on said coaxial cable;

connecting conductor portions formed continuously on an end of a shell of said coaxial connector, said connecting conductor portions being inserted into a space between said braided conductor and said dielectric material; and

a caulked, cylindrical sleeve having a crimp height H1, said sleeve formed by jointing two

10 opposing almost semi-circular members, an outside contour of each said almost semi-circular
11 member having a radius R1 so that said radius R1 and said crimp height H1 satisfy the following
12 Equations (1) and (2), respectively:

13 (1) $R1 = P1 \times (D + 2 \times T1)$ and

14 (2) $H1 = P2 \times R1$

15 where D is an outside diameter of said coaxial cable, T1 is a plate thickness of said sleeve, P1 is a
16 numerical value set within the range from 0.45 to 0.48, and P2 is a numerical value set within the
17 range from 2.02 to 2.12.

1 4. The connecting structure of a coaxial cable and a coaxial connector according to Claim 3,
2 further comprising:

3 protruding strips formed on an outer circumference of said caulked sleeve and
4 a joint portion between said almost semi-circular member and said protruding strips;
5 wherein

6 an outside contour of a cross section of said joint portion connects an outside contour of a
7 cross section of said protruding strips to an outside contour of a cross section of said almost semi-
8 circular member;

9 said outside contour of said cross section of said joint portion has a curvature radius R2
10 and said outside contour of the cross section of said protruding strips has a height H2 in a direction
11 of said crimp height H1, said curvature radius R2 and said height H2 satisfy the following
12 Equations (3) and (4), respectively:

13 (3) $R2 = P3 \times T1$ and

14 (4) $H2 = P4 \times R1$

15 where P3 is a numerical value set within the range from 1.8 to 2.2 and P4 is a numerical value set
16 within the range from 1.5 to 2.0.

1 5. A method for forming a connecting structure of a coaxial cable and a coaxial connector for
2 electrically and mechanically connecting a coaxial cable and a coaxial connector, said method
3 comprising:

4 allowing a braided conductor to be exposed from an end of said coaxial cable;

5 inserting connecting conductor portions formed continuously from an end of a shell of
6 said coaxial connector into a space between said braided conductor and a metal tape conductor
7 inside said braided conductor;

8 caulking a cylindrical sleeve having a crimp height H1, said step of caulking said sleeve
9 comprising jointing two opposing almost semi-circular members, each almost semi-circular
10 member having a radius R1, said radius R1 and said crimp height H1 satisfying the following
11 Equations (1) and (2), respectively:

12 (1) $R1 = P1 (D + 2 T1)$

13 (2) $H1 = P2 R1$

14 where D is an outside diameter of said coaxial cable, T1 is a plate thickness of said sleeve, P1 is a
15 numerical value set within the range from 0.45 to 0.48, and P2 is a numerical value set within the
16 range from 2.02 to 2.12;

17 said caulked sleeve further comprises protruding strips formed on an outer circumference
18 of said caulked sleeve and a joint portion between said almost semi-circular member and said
19 protruding strips;

20 an outside contour of a cross section of said joint portion connects an outside contour of a

21 cross section of said protruding strips to an outside contour of a cross section of said almost semi-
22 circular member; and

23 said outside contour of said cross section of said joint portion has a curvature radius R2
24 and said outside contour of the cross section of said protruding strips has a height H2 in a direction
25 of said crimp height H1, said curvature radius R2 and said height H2 satisfy the following
26 Equations (3) and (4), respectively:

27 (3) $R2 = P3 \times T1$ and

28 (4) $H2 = P4 \times R1$

29 where P3 is a numerical value set within the range from 1.8 to 2.2 and P4 is a numerical value set
30 within the range from 1.5 to 2.0.

1 6. A method for forming a connecting structure of a coaxial cable and a coaxial connector for
2 electrically and mechanically connecting a coaxial cable and a coaxial connector, said method
3 comprising:

4 allowing a braided conductor to be exposed from an end of said coaxial cable;

5 inserting connecting conductor portions formed continuously from an end of a shell of
6 said coaxial connector into a space between said braided conductor and a dielectric material inside
7 said braided conductor;

8 caulking a cylindrical sleeve having a crimp height H1, said step of caulking said sleeve
9 comprising jointing two opposing almost semi-circular members, each almost semi-circular
10 member having a radius R1, said radius R1 and said crimp height H1 satisfying the following
11 Equations (1) and (2), respectively:

12 (1) $R1 = P1 (D + 2 T1)$

13 (2) $H1 = P2 \times R1$

14 where D is an outside diameter of said coaxial cable, T1 is a plate thickness of said sleeve, P1 is a
15 numerical value set within the range from 0.45 to 0.48, and P2 is a numerical value set within the
16 range from 2.02 to 2.12;

17 said caulked sleeve further comprises protruding strips formed on an outer circumference
18 of said caulked sleeve and a joint portion between said almost semi-circular member and said
19 protruding strips;

20 an outside contour of a cross section of said joint portion connects an outside contour of a
21 cross section of said protruding strips to an outside contour of a cross section of said almost semi-
22 circular member; and

23 said outside contour of said cross section of said joint portion has a curvature radius R2
24 and said outside contour of the cross section of said protruding strips has a height H2 in a direction
25 of said crimp height H1, said curvature radius R2 and said height H2 satisfy the following
26 Equations (3) and (4), respectively:

27 (3) $R2 = P3 \times T1$ and

28 (4) $H2 = P4 \times R1$

29 where P3 is a numerical value set within the range from 1.8 to 2.2 and P4 is a numerical value set
30 within the range from 1.5 to 2.0.